

### **REMARKS**

Claims 1-20 are all the claims pending in the application. In view of the following remarks, applicant respectfully requests withdrawal of the rejections, and allowance of the claims.

#### **I. Allowable subject matter**

Applicant thanks the Examiner for indicating the allowance of claim 10 and the allowability of claims 5-8 and 17-20, and for withdrawal of all of the rejections set forth in the October 4, 2005 Office Action. However, applicant also submits that the remaining claims are also allowable for at least the reasons discussed below. Therefore, applicant respectfully declines to rewrite the allowable dependent claims in independent form at this time.

#### **II. Claims 1-4 would not have been obvious**

Claim 1 stands rejected under 35 U.S.C. § 103(a) due to alleged obviousness over Suominen (WO 99/65195) in view of Meempat et al. (US 6,778,496, hereafter “Meempat”). Further, claims 1-4 stand rejected under 35 U.S.C. § 103(a) due to alleged obviousness over Meempat in view of Conway et al. (US 6,061,331, hereafter “Conway”).<sup>1</sup> Applicant respectfully submits that the Examiner’s proposed combinations of references fail to disclose or suggest all of the features recited in independent claim 1.

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<sup>1</sup> Because the Examiner refers to Ahuja et al. (US 6,981,055, hereafter “Ahuja”) instead of Conway in the explanation of this rejection, applicant respectfully submits that the rejection should be based on Meempat in view of Ahuja (not Conway).

Applicant respectfully submits that the proposed combination of Suominen and Meempat is improper, and fails to disclose or suggest all of the features recited in claim 1. The Examiner acknowledges that Suominen fails to disclose that the method is performed for at least one class in descending order of priority, as recited in claim 1. Additionally, applicant respectfully submits that Suominen also fails to disclose that a provisioning route is computed “for each non-zero element of said traffic matrix”, as recited in claim 1. In this regard, applicant respectfully disagrees with the Examiner’s contention that page 5, line 3-page 7, line 37 discloses computing a provisioning route for each non-zero element of a traffic matrix. Applicant respectfully submits that Suominen only discloses that the call is routed in a manner that maximizes  $(p_i - r_i)$ , but does not provide any disclosure that this maximization would result in a provisioning route for each element of the traffic matrix.

The Examiner proposes to overcome the admitted deficiency of Suominen by combination with Meempat. The Examiner’s motivation at page 3 of the Office Action for this combination is a “more integrated and efficient system that provides quality of service guarantees to packet streams entering the network and serves customer demand with high priority before servicing customer demand with low priority.”

Applicant respectfully submits that the references are not properly combinable. For example, Suominen teaches a fast, fair distribution of network resources based on estimation instead of performing additional calculation regarding other links in the network at pages 2-3 and 7 of Suominen. In contrast, applicant respectfully submits that Meempat emphasizes performing calculations to choose an optimal path based on measurement, and does not disclose estimation or fairness as criteria for path selection.

Applicant respectfully submits that the express teaching of Suominen (estimation to obtain a fast and fair distribution of resources and avoiding calculation) is actually the opposite of the express teaching of Meempat (deterministic measurement and calculation-intensive steps to obtain a class-based distribution of resources). Thus, applicant respectfully submits that the proposed combination is improper under *In re Grasselli*, 218 USPQ 769 at 779 (Fed. Cir. 1983) and *In re Young*, 18 USPQ2d 1089 (Fed. Cir. 1991), because the references teach the opposite of each other.

Applicant respectfully submits that the only motivation for such a combination is the present application, which constitutes impermissible hindsight reconstruction under *In re Lee*, 61 USPQ2d 1430 at 1433-1434 (Fed. Cir. 2002). Thus, applicant respectfully submits that there is no proper motivation to combine Suominen with Meempat to cure the above-described deficiencies of Suominen.

Even if, *arguendo*, proper motivation existed, applicant respectfully submits that Meempat fails to cure the deficiencies of Suominen. For example, but not by way of limitation, applicant respectfully submits that Meempat in combination with Suominen fails to disclose or suggest computing a provisioning route for each non-zero element of a traffic matrix for at least one class in descending order of priority, as recited in claim 1. As explained above, Suominen fails to disclose these claimed features. Further, Meempat is directed to measurement (i.e., looking backward) rather than estimation (i.e., looking forward), and thus does not teach or suggest computation of a traffic matrix constructed in accordance with estimated traffic volume. For at least these reasons, applicant respectfully requests withdrawal of this rejection of claim 1.

Turning to the obviousness rejection of claims 1-4 under §103 over Ahuja in view of Meempat, applicant respectfully submits that the proposed combination of Ahuja and Meempat is improper and lacks proper motivation, as explained below.

Applicant respectfully submits that Ahuja and Meempat teach the opposite of each other. While Ahuja teaches measuring data of a first subset to extrapolate data for a second subset (looking forward to generate an estimate), Meempat discloses deterministic measurement of data of the entire domain (looking backward to obtain cost information as a basis for forming pathways) and using the measured data to perform path provisioning. Additionally, Meempat is only directed to sequential updating of a single link at a given time, as compared with the simultaneously updating and readjusting of a matrix. Applicant respectfully submits that because the references teach away from each other in terms of data collection and computation, applicant respectfully submits that the combination is improper.

Further, applicant respectfully submits that the Examiner's proposed motivation at page 4 of the Office Action, which is the same motivation the Examiner offered for the combination of Suominen and Meempat, does not provide sufficient motivation or suggestion for one skilled in the art at the time of the invention to combine the references. Applicant respectfully submits that the only motivation for the proposed combination is in view of the presently claimed invention, and is thus impermissible hindsight reconstruction, as explained above.

Further, applicant respectfully submits that the Examiner's proposed combination of Meempat and Ahuja fails to disclose or suggest all of the claimed combination of features recited in claim 1. For example, but not by way of limitation, applicant respectfully submits that the

proposed combination of Meempat and Ahuja fails to disclose or suggest estimating traffic volume and constructing a traffic matrix in accordance with the estimated traffic volume, as recited in claim 1. In contrast, Ahuja discloses at column 5, lines 5-15 that measurements are taken for certain subnetworks, and then the measured data is extrapolated to a larger set of subnetworks, such that the a table is created that contains measured or extrapolated information.

Additionally, applicant respectfully submits that the proposed combination of references fails to disclose or suggest computing a provisioning route for *each* non-zero element of the traffic matrix, as recited in claim 1. In contrast, Ahuja computes its provisioning route by comparing many tables to select an optimal path. However, Ahuja does not disclose performing this computation for each non-zero element of table. Further, as admitted by the Examiner, Ahuja does not disclose performing the method for at least one class in descending order of priority, as recited in claim 1.

Applicant respectfully submits that Meempat fails to cure these deficiencies of Ahuja. For example but not by way of limitation, applicant respectfully submits that Meempat fails to disclose or suggest computing a provisioning route for each non-zero element of a traffic matrix for at least one class in descending order of priority, as recited in claim 1. Meempat is directed to deterministic measurement rather than estimation, and thus does not teach or suggest computation of a traffic matrix constructed in accordance with estimated traffic volume.

Dependent claims 2-4 depend from independent claim 1. Applicant respectfully submits that these dependent claims are allowable for at least the same reasons as discussed above with respect to independent claim 1. Additionally, applicant respectfully disagrees with the

Examiner's assertion that column 12, lines 45-48 of Ahuja discloses or suggests maximizing a traffic acceptance rate and minimizing a hop-bandwidth product rate as recited in claim 4.

Thus, applicant respectfully requests withdrawal of the rejections and allowance of claims 1-4.

**III. Claims 11, 12 and 14-16 would not have been obvious**

Claims 11, 12 and 14-16 stand rejected due to alleged obviousness under 35 U.S.C. § 103(a) over Meempat et al. in view of Ahuja. Applicant respectfully submits that the Examiner's proposed combinations of references fail to disclose or suggest all of the features recited in independent claim 11.

As explained above, applicant respectfully submits that Meempat and Ahuja cannot be properly combined because they teach away from each, and also due to lack of proper motivation to combine. Additionally, applicant respectfully submits that the proposed combination fails to disclose or suggest the calculation of an optimal path by resetting a previously calculated path if the resetting cost for the previously calculated path is less than the cost of suboptimality, as recited in independent claim 11.

Applicant respectfully disagrees with the Examiner's assertion that Meempat discloses this claimed feature. Applicant respectfully submits that although Meempat discloses updating the cost metrics at individual nodes, this updating is performed sequentially, and there is no comparison between the cost of suboptimality and the cost of resetting the previously calculated path. Applicant submits that Ahuja fails to cure this deficiency of Meempat, as neither region compares calculates the cost of resetting a previously calculated path with the cost of

suboptimality, and performs the resetting if the cost of resetting is less than the cost of suboptimality, as recited in claim 11. Applicant respectfully submits that in both Ahuja and Meempat, the claimed cost criteria would not be considered in any resetting process.

Dependent claims 12 and 14-16 depend from independent claim 11. Applicant respectfully submits that these dependent claims are allowable for at least the same reasons as discussed above with respect to independent claim 1. Additionally, applicant respectfully submits that the Examiner's proposed combination of Ahuja and Meempat fails to disclose or suggest all of the features recited in claim 16, for at least the reasons discussed above with respect to claim 1.

Therefore, applicant respectfully requests withdrawal of the rejections, and allowance of claims 11, 12 and 14-16.

#### **IV. Claims 9 and 13 would not have been obvious**

Claims 9 and 13 stand rejected due to alleged obviousness under 35 U.S.C. § 103(a) over Ahuja in view of Meempat as applied to claims 1 and 11 respectively, and further in view of Beshai et al. (US 6,339,488, hereafter "Beshai"). Dependent claims 9 and 13 respectively depend from independent claims 1 and 11. Applicant respectfully submits that these dependent claims are allowable for at least the same reasons as discussed above with respect to independent claims 1 and 11. Therefore, applicant respectfully requests withdrawal of the rejections, and allowance of claims 9 and 13.

**V. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

A one month extension of time is respectfully requested, the required fee being paid through the Electronic Filing System. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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